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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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JUL 12 1996

Federal Communications Commission
Office of Secretary

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

FCC 96-207 – FIFTH FURTHER NOTICE OF PROPOSED RULE MAKING

COMMENTS OF

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July 10 1996

Polaroid Corporation files these comments on July 10 1996, in the FCC's Fifth Further Notice of Proposed Rule Making in the Matter of Advanced Television Systems, MM Docket No. 87-268.

Submitted by:

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Polaroid supports the majority of the proposed ATV standard, but takes exception to the inclusion of interlace formats (see attachments for further discussion and rationale). We at Polaroid believe the opportunity exists to produce near photographic quality television images using progressive scan.

Polaroid has introduced a commercially available broadcast quality HDTV camera meeting the 720P, 60fps format specified in the proposed ATV standard. This camera was introduced in April 1996 at the NAB show in Las Vegas where it received several awards including the NAB editors award for advancing the art and science of television broadcast.

Attached is a discussion of the progressive versus interlace issue as it has been impacted by the introduction of this camera. Introduction of this camera dismisses the last remaining argument for including interlace as a transitional format.

What is the best scanning approach for DTV?

Even interlace advocates recognize that the **future is progressive**

- Interlace is a fifty year old pre-digital compression technique
- Computer industry uses progressive
- Motion picture production industry wants progressive

So why introduce a new interlace format? ***There is no technical reason***

Current Reality

- 720P has more lines of resolution than 1080I, with no interlace flicker
- 720P produces 60 full frames per second with no interlace motion impairments
- no real cost difference in receiver
  de-interlacing at home is either expensive or poor quality
  scaling progressive resolution is cheaper
  progressive is easier to compress
- progressive exists now - permits improvements as technology advances
- more progressive scan computer monitors sold per year than TV receivers
- see the PTC-9000

The consumer has no benefit whatsoever from interlace transmission!

Common Questions

QUESTION

Is there harm in including interlace options in DTV?

ANSWER

Yes.

- It will delay the inevitable move to progressive.
- Burdens consumer investment with obsolesent technology.
- Blocks interoperability with computing and communications.
- Is a weak link in chain, compromising other components.
- Interlace options degrade progressive options.

QUESTION

Is there a problem with going all progressive?

ANSWER

No.

QUESTION

Is there an advantage to all progressive?

ANSWER

Yes.

- Best addresses ACATS' interoperability goals.
- Cheaper and higher quality.
- Broadcasters can skip interim interlace formats.

Progressive is Progress. Choose the Future Now!

PTC-9000
The Camera that Couldn't be Built

How did we do the impossible?
We didn't think it was impossible!

Why is it possible now to build a production quality progressive camera?

- Purported technical barriers not found.
- Designed a state-of-the-art CCD (comparable technology available at a few companies worldwide).
- Partnership with Polaroid, Philips/BTS, and MIT.

The PTC-9000 represents the first production quality demonstration of a 720 line progressive, 60 full frame per second, high resolution camera. The camera exhibits:

- No Blooming
- No Smear
- No Image Lag
- Photographic Quality
- Best Sports and Motion Imaging

Get the Whole Picture (60 Times a Second)